



Mergers in Higher education:

The international experience and the case of Greece

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SCHOOL OF ECONOMICS, BUSINESS ADMINISTRATION & LEGAL STUDIES

A thesis submitted for the degree of

Executive Master in Business Administration (E-MBA)

January 2019

Thessaloniki – Greece

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January 2019
Thessaloniki – Greece

Abstract

This thesis aims to examine the success factors and barriers for mergers in European universities after World War II. The results from studying the general literature on mergers in tertiary education, will be strengthened with the study of two cases at European level, the successful case of the merger of the University of Manchester and the unsuccessful case of the merger of three Colleges (Buskerud, Vestfold and Østfold) in Norway.

Based on the findings from the systematic literature review and the two cases, we analyze the success factors and the barriers of mergers that have taken place in Universities worldwide. Finally, we provide some recommendations for the mergers in the Greek tertiary education, which is in progress from the beginning of 2018.

Keywords: Universities mergers; tertiary education; success factors; barriers; effectiveness; challenges; obstacles.

Thomais Gkrimpizi

17/01/2019

Preface

I wish to express my sincere gratitude to my thesis supervisor, Assistant Professor Vassilios Peristeras, of the School of Science and Technology of the International Hellenic University for his continuous support and guidance throughout all stages of my dissertation and for providing me the opportunity to explore the world of mergers in universities worldwide. I am also grateful for the valuable help provided by the Head of the IHU Library, Ms Georgia Roidouli, and the IHU Library staff during the course of my project. Finally, I would like to express my deepest thanks to my daughter Anastasia, my family and friends, for their encouragement and assistance in all aspects of my master's studies.

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Acronyms and abbreviations

ECTS	European Credit System
EHEA	European Higher Education Area
EUA	European University Association
HEFCE	Higher Education Funding Council for England
HEI	Higher Educational Institute
HQA	Hellenic Quality Assurance and Accreditation Agency
OECD	Organization for Economic, Co-operation and Development
PWA	University of West Attika
TEI	Technological Educational Institute

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1. Introduction and Background

In this first part, we present the historic background and the recent trends in university mergers (part 1.1), we discuss the what (part 1.2) and why (part 1.3) of mergers and we briefly present the major results of these initiatives (part 1.4). Last, in part 1.5, we present the structure of this dissertation.

1.1 The background and trends on university mergers

Extensive international literature is available around university mergers. The topic has been extensively investigated by the academic community for the past four decades, and international literature is therefore abundant.

Some of the issues examined worldwide include the followings:

- The importance of collaborations, alliances and mergers in academic performance and economic efficiencies between higher education institutions (Williams, 2017).
- Most attention was given to administrative and research-related issues and less or none to educational issues (Ursin, J., Aittola, H., Henderson, C., & Välimaa, J. , 2010).
- The merge affected staff and influenced their subsequent academic and administrator experiences (Pritchard, R. M., & Williamson, A., 2008).
- The demand for greater efficiency, higher quality and reductions in public budgets will lead more countries to look closely at their higher education system structures (Skodvin, O. J., 1999).
- The structural reform of Western Europe's higher education systems and how different countries have changed their systems over the last four decades (Kyvik, 2004).
- The need for a scientific study on the academic, economic and social impact of the merger between universities and technological institutions (HQA, 2018).

University merger projects have become quite frequent in the past years. However, mergers between universities is not a new phenomenon and the oldest ones date back to the 19th century.

Mergers happen as a consequence following various changes in society such as globalization, internationalization, rankings, the drive for quality and above all the challenging economic environment (Estermann, T., & Pruvot, E. B., 2015). It is important to question and analyze the process for the rationale of mergers as well as to assess their success and/or failures.

Large-scale changes in tertiary education in different countries worldwide took place after World War II. Before 1960, universities and specialized colleges offered higher education. Certain professions such as teaching, and engineering were not included in universities and therefore they were not considered to belong to higher education. In the 1960s student numbers increased as there was a need for skilled labor, and that resulted in the expansion of the university system. To cover the labor demand, not only the existing training schools were upgraded to colleges of tertiary education, but also new non-university higher education institutions were created (Kyvik, 2004). Vocational education catered for needs that were not covered by Universities, to prepare students for certain professions and occupations, therefore they were more practically oriented. However, in some countries, vocational education programs remained part of the traditional universities.

After the 1960s major changes occurred in higher education. In the 1960s and early 1970s, the UK's Ministry of Education decided to establish a binary tertiary education system by founding colleges of advanced education and polytechnics as alternatives to universities. Similarly, in the 1970s, the German and Swedish authorities applied mergers, as a measure for the improvement of their own systems. In the case of the USA, from 1960 up to now, mergers have been implemented not only in public but also in private higher educational institutions. (Skodvin, O. J., 1999).

Based on the socioeconomic changes in the late 1970s and 1980s, the relevance and needs for education and high-skilled employees became more prominent and increasingly many students opted for non-university higher education programs. Consequently, there was also a necessity to upgrade vocational programs and to further develop the higher education sector. According to a study by the OECD, the efforts to establish non-university higher education sector had been a successful endeavor in most countries. As a result, we can observe a growth in students' population studying in non-university institutions. These institutions managed to

retain their vocational orientation, to keep their programs duration short and to adhere to academic values (Gellert, 1991).

In the following decades (middle 1980s and 1990s), there was a considerable increase in mergers, due to the continuing restructuring of the higher education systems. Examples of these kind of restructuring can be found in the Dutch (1983-1987), Australian (1987-1990), Norwegian (1994), Flemish (1994) and Finnish (1991 – 1995) education systems (Skodvin, O. J., 1999).

Mergers in tertiary education occurred in different waves and were affected by the changes in educational demands and regulations, public policies and management practices (Seliga, R., Sulkowski, L., & Wozniak, A., 2018).

The mergers that occurred during middle 1980s and 1990s, were targeting the following three goals, as explained by Seliga et al:

- Rationalization of higher education and science networks
- Restructuring of the higher education system
- Optimization of the costs of the university's activity and the entire system (economies of scale)

The last wave of mergers, at the beginning of the 21st century is mainly caused by the desire to (Seliga, R., Sulkowski, L., & Wozniak, A., 2018):

- Enter the “world university league” by the universities from a given country,
- Create scientific excellence and “islands of excellence” in universities,
- Occupy the highest places in international rankings”

Between 2000 and 2015, around 100 mergers have been recorded in 25 European higher education systems. There has been a continuous increase in numbers since 2000: from 3–5 mergers per year until 2006 to 7-8 mergers per year between 2007 and 2012, peaking in 2013 and 2014 with 12 and 14 mergers per year (EUA, 2015), as shown in Table 1.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	total
BE-fl				1										5			6
BE-fr										2		2					4
DE				1		1				1				1			4
DK							2	5					1				8
EE	1	1	1			3	2		1		1		1				11
FI									1		2			1			4
FR										1			2	1	8	4	16
HR			1	1			1										3
HU									1	1			1				3
IE												1		1			2
IS									1								1
IT															1		1
LT											1						1
LV					1						1		1				3
NO										1		1		1	2		5
PL		1			1					1							3
PT														1			1
SE									1		1	1		1	1		5
SK						1											1
UK ⁸			1		1			2			1	2	2		2		11
Total	1	2	3	3	3	5	5	7	5	7	7	7	8	12	14	4	92

Table 1: Number of merger cases in Europe per system 2000-2015.

Source: Define Thematic Report: University mergers in Europe, EUA 2015

1.2 What is a university merger?

Skodvin defines merger as “the action of two or more previously separate institutions becoming one new single institution, which may retain the name and legal status of one of them or be an entirely new legal entity”. Alternatively, an institutional “merger” refers to the combination of two or more separate educational institutions that surrender their legally and culturally independent identities in favor of a new joint identity under the control of a single governing body (Harman, 2002) (Harman, K. and Meek, V.L. , 2002). In addition, we can find “weaker” merger forms such as alliance and collaboration (HEFCE, 2012). Federations can be seen as a more flexible version of full merger (Skodvin, O. J., 2014)& (HEFCE, 2012).

When discussing who initiated the mergers, it can be useful to differentiate between forced and voluntary mergers. Voluntary or bottom up mergers happen when the institutions themselves have commenced the merger which often becomes necessary by circumstances (Skodvin, O. J., 1999), while forced or top down mergers happen when an external entity from the institution is responsible for the merger.

The following major types of mergers were identified in higher education (Azziz, R., Hentschke, G. C., Parthenon-EY, E., Young, L. L. P., Jacobs, B. C., Jacobs, L. A., & Ladd, H., 09/2017):

a) Horizontal mergers occur between institutions that offer courses in the same or similar academic profiles; a merger of two relatively similar four-year baccalaureate or masters-level level institutions would be an example of a horizontal merger.

b) Vertical mergers between two or more different institutions which work in similar academic fields but have different academic profiles (e.g. a technical university and an engineering polytechnic); a merger of a four-year institution with a health sciences doctoral university would be an example of a vertical merger, as would the merger of a two-year and a four-year institution.

c) Diversification mergers between separate institutions which work in different academic fields and offer similar types of products, e.g. a university college that offers education in economics and a university college that offers education in engineering.

d) Conglomerate mergers between institutions which work in different academic fields and offer different kinds of products, e.g. a comprehensive university and a polytechnic.

1.3 Why *merging*?

There is a widespread agreement that merging processes rarely or never have a smooth path. But despite this, mergers are used to create organizational change both at macro (national) and micro (institutional) level. Why then is this the case?

A possible explanation is that both initiators and participators generally think that there are certain advantages that are clearly more important than potential disadvantages and risks. Common motivation patterns in different countries include resolving financial problems at the institutions and more strategically, improving the status of the institution on regional, national and international levels. The driving force behind merging seems to be the assumption that there will be relative gains, due to maximizing economies of scale and benefit in terms of administration, economy and academic performances.

Administrative benefits

The perceived administrative benefits appear in terms of increased number of administrators available with expertise in their respective fields, potentially a new and more effective administration with adoption of good practices from the previous institutions, as well as access to improved infrastructure and facilities.

As a general rule, mergers usually result in a more efficient, professional administration with reinforced governance and management.

Economic benefits

Economic benefits appear from saving money from services that have been absorbed in the merger. It is reported that this perceived benefit is less commonly realized, least of all in the short term, due to resources required, especially in the implementation and transition phase. In the long term, as mentioned above, economies of scale might play a role and offer some benefit primarily through pooling and commonly used systems/resources (Skodvin, O. J., 1999); (Harman, G., & Harman, K., 2003); (HEFCE, 2012).

Academic benefits

Finally, the perceived benefits in terms of academic performance include the following: removing programs that are shared, or equivalent; reinforcing both research and teaching as the personnel capable of producing such would increase in numbers; expanding upon academic integration and collaboration by creating new fields between different disciplines and lastly, by creating a strong, more diverse academic national and international profile for the new institution, i.e. by merging institutions that complement each other in their fields.

1.4 High level results of the universities mergers according to the literature review

Current literature on higher education mergers underlines the fact that merging indicates comprehensive and thorough change happening for all parties involved: the governance of the institutions as well as the very core and principal values of each separate entity that formed the merger, including the norms, aims and academic programs (e.g. (Mulvey, 1993); (Skodvin, O. J., 1999); (Harman, G., & Harman, K., 2003); (HEFCE, 2012); (Svein Kyvik & Bjørn Stensaker, 2013)).

The international mergers experiences are quite mixed. We can say that merger has generally led to strengthening of governance, administration and management. This is especially true for management, which usually becomes more professional and efficient. Important savings in terms of the number of administrators are less common. Despite the fact that larger units have eliminated duplicate administrative functions, mergers did not lead to fewer administrators in total, rather the opposite. This applies to both multi-campus / network organizations and institutions in the same location, e.g (Skodvin, O. J., 1999); (Harman, G., & Harman, K., 2003); (HEFCE, 2012).

It is of importance to note that successful mergers, at least academically, depend on the intent and reasons behind the merger (Skodvin, O. J., 1999). Voluntary mergers between complementary institutions have, as a general rule, been more successful academically than those with the aim to remove duplications and increase academic integration.

The main aim of mergers is to establish better academic institutions. This includes teaching and research. Experiences are mixed on final results in this respect. However, there are clear indications that mergers improve the academic position of the new institutions in the future, in particular with regard to the scope of education. Mergers in many countries worldwide have developed broader and more multidisciplinary courses that still work well. Complementary expertise among employees can provide the basis for an increase in the number of subjects offered in both width and depth (e.g. PhD programme) (e.g. (Svein Kyvik & Bjørn Stensaker, 2013); (Ursin, J., Aittola, H., Henderson, C., & Välimaa, J. , 2010); (Mulvey, 1993); (Harman, G., and Harman, K., 2008)).

The biggest risks with mergers are related to stress, fear and sometimes insufficient planning at all levels. This has created tensions that tend to affect the academic development of the new institution in the long term. Such tensions may appear to issues such as prioritizing teaching versus research, the different and new skills profiles, the new institution identity and autonomy.

In mergers, where the main strategy was to increase academic integration and collaboration, problems between different academic cultures were often created, which again hindered positive academic growth. In some institutions, integration objectives have been achieved to some extent, but the strategy has not been successful in general. There are many complex reasons for this lack of academic cooperation. Firstly, it is difficult to align different cultures and traditions. Secondly, coordination over distance is difficult for multi-campus institutions in particular. Success depends to some extent on geographical proximity. Thirdly, academic integration also requires investment (funding), which is often underestimated by the institution and by education authorities in state-initiated reorganizations. Overall, economic flexibility and adequate access to resources are extremely important in a reorganization process, in particular during the implementation phase. (e.g. (Skodvin, O. J., 1999); (HEFCE, 2012); (Harman, G., & Harman, K., 2003).

1.5 Structure of this dissertation

In the next chapter, we present the scope and methodology of the thesis. Then in chapter 3, we refer to the success factors and barriers affecting Universities mergers. Chapter 4 describes the analysis of the results related to success factors and barriers. Finally, in chapter 5 we discuss the case of Greece and possible challenges.

2. Scope and Methodology

In this chapter we present the scope (part 2.1), methodology (part 2.2), analysis of the two cases of the universities merger, a successful and an unsuccessful one (part 2.3), and finally, analysis/assessment of the process of merger in Greek tertiary education (part 2.4), of the thesis.

2.1 Scope

In this thesis we focus on the following aspects:

- a) We examine the factors, the process and the results for mergers in European universities after World War II. Studying the general literature on mergers in tertiary education helps us to identify the **success factors** and **barriers** in University mergers. Mainly, our goal is to answer the following research question: *“What are the key determinants in University mergers? Success factors vs Barriers”* and we focus our research to university/college/higher education mergers examining success factors and barriers.
- b) We analyze the two cases of university mergers from the international experience to enrich and strengthen our findings from the literature review with experience and findings from real merger cases. The Universities chosen are: a) Manchester University, in UK, considered as the successful case and b) University Colleges of Buskerud, Vestfold and Østfold, in Norway, considered as the unsuccessful case.
- c) Using the findings, success factors and barriers identified from the literature and the analyzed cases, we study three cases of mergers that have taken place in Greek Universities since the beginning of 2018 i.e. the University of West Attika (PADA), the Ionian University and the University of Ioannina. We assess to what extent success factors and barriers as well as the European standards and good practices have been taken into account.

2.2 Literature review

The research method of this study was based on systematic literature review. Quoted from (Siddaway, 2014) *“systematic reviews sit above all other research designs at the top of the*

‘hierarchy of evidence’ because they have the potential to provide the most important practical implications”.

We conducted a research based on keyword searches that will lead us to identify the key determinants of University mergers, through analyzing the success factors and barriers.

The most important content was found by retrieving information of the following electronic resources:

- (1) Organization for Economic Co-operation and Development (OECD)
- (2) European University Association (EUA)
- (3) Hellenic Quality Assurance and Accreditation Agency (HQA)
- (4) Business Source Complete (EBSCO)
- (5) Google Scholar

The search terms that have been used, came from all the possible combinations of our research items that correspond to the key determinants of University mergers that can be distinguished into success factors and barriers (Table 2). Moreover, in order to locate and investigate the success factors, we used synonym terms such as effects, impact, consequences, influence, outcomes and effectiveness.

<i>Success factors</i>	<i>Barriers</i>	<i>Mergers</i>	<i>University</i>
Effects	Obstacles	Amalgamations	Higher Education
Impact	Challenges	Consolidation	College
Consequences	Difficulties	Collaboration	Tertiary
Influence	Issues		
Outcomes	Problems		
Effectiveness			

Table 2: List of Keywords used for the literature review

The following keywords were selected separately and in combination for both success factors and barriers:

(effects OR impact OR consequences OR influence OR outcomes OR effectiveness) AND (amalgamations OR consolidation OR collaboration) AND (university OR higher education OR college OR tertiary)

(obstacles OR challenges OR difficulties OR issues, OR problems) AND (amalgamations OR consolidation OR collaboration) AND (university OR higher education OR college OR tertiary)

Initially when we started gathering the results, we sorted them to find duplicates and see whether the literature search covered the requested topics. The chosen search results were based on title, abstract and the overall quality of the published evidence.

2.3 Analysis of cases

As already explained, we tested and enhanced the findings from the literature review with the analysis of two cases of real university mergers. The successful case of Manchester University, in UK, and the unsuccessful case of University Colleges of Buskerud, Vestfold and Østfold, in Norway. The main reason for both options was based on the fact that success factors and barriers that found in both cases accordingly, were not only the ones found in the systematic literature review but some additional ones that were unique for each case.

2.4 Greek cases analysis/assessment

During 2018, three cases of institutions mergers commenced in Greece; the University of West Attika (PADA), the Ionian University and the University of Ioannina. In this part we will try to check the success factors and barriers and to identify which of these were taken into account in the design of the mergers as these are documented in the relevant legislation documents.

3. Success Factors vs Barriers affecting University mergers

In this part, we present the findings from the systematic literature review (part 3.1). These findings are the success factors (part 3.1.1 and barriers (part 3.1.2). In the part 3.2 we demonstrate the successful case of Manchester University (part 3.2.1) and the unsuccessful case of University Colleges of Buskerud, Vestfold and Østfold (part 3.2.2).

3.1 Findings from the literature reviews

In the scope of the systematic literature review we identified several common themes in terms of factors for successful mergers and barriers towards their completion. We summarise the findings below.

3.1.1 Success factors

Several themes emerged from the systematic literature review, a complete table of which can be found in Appendix (Figure 1). We have included a list with the success factors mentioned, which we have further split into:

- The design phase is a list of prerequisites which can be used to make design choices developed in the definition phase. In the design phase one or more designs are developed that seem to achieve the project result;
- The implementation phase is the completion phase and this phase involves building the actual project result;
- Those that are common to both.

Design

- Both (EUA, 2015) and (Puusa, A., & Kekäle, J., 2015) mention that a major motivation for a horizontal merger is to raise the institutional profile of both participant institutions in order to raise their international standing and ranking.
- (EUA, 2015) which casts a closer look at the success factors, references several success factors in the design phase, including the importance of shaping out the added value of the merger; estimating the transition costs; identifying the expected gains of the merging institutions prior to its undertaking; as well as considering the losses,

opportunity costs and assessing the relevance of alternative collaboration mechanisms' cost.

- Skodvin in his various papers (references) mentions several key success factors in the design phase, including the importance of identifying expected gains prior to the merger; allocating resources to the transition phase for its smooth undertaking; and observing that there is no significant overlap in the academic offers.
- Geographical coherence in having contiguous campus space is mentioned by several sources as one of the success factors that contributed to the merger by assimilating all available infrastructure and expanding the campuses (EUA, 2015); (Brown, N., Denholm, J. and Clark, T. , 2003b) and (Georghiou, L., & Harper, J. C., 2015).
- In the case of the creation of the University of Manchester by assimilating its previous constituent institutions, an important factor was the common history the partners shared (Georghiou, L., & Harper, J. C., 2015) and (Brown, N., Denholm, J. and Clark, T. , 2003b).
- (Williams, 2017) points out the importance of having a straightforward and clear common political and strategic goal in the Green and White papers from authority, in order for the merging to be successful and remain so at all stages.

Implementation

- (EUA, 2015) mentions success factors in the implementation phase, and references several success factors, including the importance of striking the correct balance between involvement and disruption from the normal workload; considering thematic organization and different degrees of involvement; carrying out an ex-post evaluation of the process; and lastly, considering halting the process or setting up alternative collaboration measures if there is a negative outlook.
- Skodvin in his various papers (references) also mentions several key success factors in the implementation phase, including the importance of creating a common platform between the merging institutions; creating a new common identity and unique purpose for the merged institutions; having sufficient resources, financial planning and risk assessment; having a strong project management system; and finally, the importance of developing technical network.

- (EUA, 2015); (Harman, 2002) and (Brown, N., Denholm, J. and Clark, T. , 2003b) agree that it is of importance to consider setting up advisory bodies to strengthen the link between the new leadership and the different structures and groups.
- (EUA, 2015); (Ripoll-Soler, C., & de-Miguel-Molina, M., 2014) and (Brown, N., Denholm, J. and Clark, T. , 2003b) a find that the promotion of the academic aspects of the merger can be a success factor, by combining resources and building on the existing research profiles of each institution.
- (EUA, 2015) and (Brown, N., Denholm, J. and Clark, T. , 2003b) also mention that developing a coherent institutional identity is paramount so that the different parties will engage and be willing to make the merger a success.
- (Seliga, R., Sulkowski, L., & Wozniak, A., 2018) and (Georghiou, L., & Harper, J. C., 2015) report that the plan implementation should happen on a stable basis, which is critical on the preparation phase.
- (Georghiou, L., & Harper, J. C., 2015) mentions that another success factor would be internal support from staff and students in the endeavor to accomplish the merging process successfully.
- (Williams, 2017) and (Brown, N., Denholm, J. and Clark, T. , 2003b) agree that securing the sufficient financial resources for the merging process is very important, i.e. by applying for funding.
- (Williams, 2017) identified that trust and partner compatibility is an important success factor to establish a successful amalgamation.
- Lastly, (Harman, 2002) indicate that equal treatment between the staff of the merging parties regardless of their original size will assist with the endeavor of the merger.

Common to both phases

- Several papers, including (Skodvin, O. J., 2014) highlight the importance, especially in the implementation phase of the merger (Skodvin, O. J., 1999), of a strong vision and set of common values shared by the merging parties.
- The (EUA, 2015) paper mentions the success factors that are applicable in both phases, including the importance of identifying and reaching out to internal and external stakeholders; ensuring adequate feedback loops at all levels; acknowledging change and possible losses and explain gains to the different constituencies; and lastly,

following favorable political and regulatory developments (autonomy reform; “operation campus”).

- Skodvin in his various papers (Skodvin, 1997); (Skodvin, O. J., 1999) and (Skodvin, O. J., 2014) also mentions the importance of having an effective communication plan in place; identifying and taking steps to ensure the right leadership is helping with the merger.
- (Williams, 2017) mentions that one of the key success factors at any stage of the merging process is an effective communication plan as the success of several processes depends on it, i.e. fiscal, legislative and regulatory matters. Other success factors mentioned in this paper were the fact that there should be shared governance and joint decision-making between the different institutions, as well as clear understanding of the roles and responsibilities of each of the parties involved.
- (EUA, 2015); (Georghiou, L., & Harper, J. C., 2015) and (Brown, N., Denholm, J. and Clark, T. , 2003b) mention as success factors at all stages involving the different groups of the institutions throughout the entire process; as well as adopting a transparent approach that allows everyone to voice their opinions.
- (EUA, 2015) and (Brown, N., Denholm, J. and Clark, T. , 2003b) suggest that setting clear progress indicators that are visible and understood by all parties is a good way of measuring the development of the merger.
- (EUA, 2015); (Harman, 2002) and (Brown, N., Denholm, J. and Clark, T. , 2003b) agreed that progress should be monitored at intermediary stages and costs should be assessed at each stage for a merger to be successful.
- (Georghiou, L., & Harper, J. C., 2015) indicates that a clear strategic rationale helps along with a successful merger by keeping everyone informed and aware of any changes that follow.
- Lastly, (Harman, 2002) and (Georghiou, L., & Harper, J. C., 2015) point out that external support and gaining access to resources, financial and otherwise, would also contribute to a successful merger.

3.1.2 Barriers

Similar to the success factors, barriers that were identified have been listed in Appendix

(Figure 2). Here we provide a similar breakdown of the success factors relevant for the design phase, the implementation phase and those that are common to both.

Design

- (EUA, 2015) mentions that one of the reasons for failure of the mergers is change of leadership teams during the preparation process, leaving the endeavor without coherence.
- (EUA, 2015) and (Ribando, S. J., Slade, C. P., & Fortner, C. K, 2017) mention that diversity in the governance and administration profiles of the partners can also be a barrier toward a successful merger.
- (EUA, 2015) and (Seliga, R., Sulkowski, L., & Wozniak, A., 2018) found that another barrier was having no extra resources allocated to the merging parties, which meant that they had less relative research funding after the merger than prior to it.
- (Seliga, R., Sulkowski, L., & Wozniak, A., 2018) also mentions that barriers may result from the unstructured ownership of the organization and thus lack of cohesive guidance and trust in the process.
- (Puusa, A., & Kekäle, J., 2015) and (Stensaker, B., Persson, M., & Pinheiro, R. , 2016) agree that another barrier is the geographical distance between the different campuses, which may benefit the different merging parties unequally and result in the breakdown of the merger.
- Lastly, (Stensaker, B., Persson, M., & Pinheiro, R. , 2016) mentions that HEIs that are not in the same financial position might prove to be a barrier as they might contribute to the merger process disproportionately and thus be dissatisfied with the endeavor.

Implementation

- (EUA, 2015) and (Skodvin, O. J., 1999) mention that having limited human resources dedicated to the merger and adding significant additional workload for the staff involved might also contribute as a barrier.
- (EUA, 2015); (Svein Kyvik & Bjørn Stensaker, 2013); (Williams, 2017) and (Puusa, A., & Kekäle, J., 2015) all agree that one significant barrier is difficulty in merging the previous administrative systems into a uniform one.
- Several sources, including (EUA, 2015); (Seliga, R., Sulkowski, L., & Wozniak, A., 2018);

(Svein Kyvik & Bjørn Stensaker, 2013); (Skodvin, O. J., 1999); (Williams, 2017); (Puusa, A., & Kekäle, J., 2015); (Ribando, S. J., Slade, C. P., & Fortner, C. K, 2017) and (Harman, 2002) agree that a significant barrier for the success of the merger is the financial implications of such an endeavor for both staff and students, as well as the institutions themselves.

- (Seliga, R., Sulkowski, L., & Wozniak, A., 2018) and (Williams, 2017) report that another barrier is the lack of provisions generating forms and methods of mergers. The organizations themselves seek good ways to implement mergers.
- (Harman, 2002) and (Stensaker, B., Persson, M., & Pinheiro, R. , 2016) mention that an important barrier is HEIs' focus in regional or their own interests, and subsequently pursue them in the process of the merger, or are unhappy that they are the priority.
- (Stensaker, B., Persson, M., & Pinheiro, R. , 2016) mentions that barriers could also be internal fears of each participant institution with respect to academization or academic drift, as well as different strategic agents of the external stakeholders.
- Finally, (Svein Kyvik & Bjørn Stensaker, 2013) identifies that too optimistic and overconfident decision-makers in the process of the merger can adversely impact it and it may break.

Common to both phases

- (EUA, 2015) finds several barriers common to both phases of the merging process: changing management methodologies not proportional to the ambition of change; the fact that there is no guidance, no “best practices” available to pioneer the merger process; and lastly, to continue without having a solid base of staff support could lead to resentment and disappointment, and thus breakdown of the merger.
- Various sources, including (EUA, 2015); (Seliga, R., Sulkowski, L., & Wozniak, A., 2018); (Svein Kyvik & Bjørn Stensaker, 2013); (Skodvin, O. J., 1999); (Ribando, S. J., Slade, C. P., & Fortner, C. K, 2017) and (Stensaker, B., Persson, M., & Pinheiro, R. , 2016) agree that cultural limitations, specifically in the conditions of culture of society, organizational culture and organizational identity, set a barrier at any phase of the merger, by potentially sowing mistrust and cultural confusion.
- (Seliga, R., Sulkowski, L., & Wozniak, A., 2018) mentions that having little legal experience in the area of public university mergers, as well as lacking the experience

to manage such change at all phases might contribute to its breakdown.

- (Seliga, R., Sulkowski, L., & Wozniak, A., 2018) and (Williams, 2017) also indicate that poor strategic planning at any stage of the merger can be a barrier.
- (Seliga, R., Sulkowski, L., & Wozniak, A., 2018) and (Stensaker, B., Persson, M., & Pinheiro, R., 2016) found that lack of political decisions, i.e. laws regarding creation, liquidation and merging of institutions can also pose a significant barrier.
- Lastly, as per (Harman, 2002), the fear of hassle or loss of identity for the different parties, can also make the merging process extremely difficult, and may even result in its breakdown.

3.2 Cases

3.2.1 Successful case – Manchester University

On 1 October 2004, the University of Manchester was established by an effective merger of two institutions, the University of Manchester (VUM) and the Institute of Science and Technology (UMIST) of the University of Manchester.

The history of both universities was a very close partnership and a very long relationship. UMIST, a technical university but with a large management school, originated in 1824 when a group of prominent local citizens set up a Mechanical Institute for Employee Education. By 1883 it had become a technical school, but from the point of view of the relationship, a key stage came in 1905 when it acquired the status of the Faculty of Technology at Manchester's Victoria University and was thus able to award degrees. In 1955, when the institution received its own charter and funding stream from the University Grants Committee, the formal university status came.

The Victoria University of Manchester was a much larger comprehensive university, which began with the legacy of the Victorian merchant and philanthropist John Owens in 1851 and won a Royal Charter in 1880.

This background shows a long history of often very close cooperation, but at different times it takes different forms.

In the successful case of Manchester University, the main issues identified from (Georghiou, L., & Harper, J. C., 2015) and (Brown, N., Denholm, J. and Clark, T. , 2003b) were:

- The history of cooperation and a shared view of the changing environment in which higher education operated and a shared recognition of the importance of size and strength to be a successful player in the international research arena;
- Both universities were research-intensive and broadly shared the same missions;
- The equal representation from both partners;
- Council members were key stakeholders. They involved to make the necessary decisions and thereafter provided a source of support for the decisions;
- The establishment of a Joint Working Group which was independent from the leadership of the two previous Universities;
- Good personal relations between the senior managers at both universities;
- The involvement of external stakeholders through networking activities of the project brought significant benefits meaning that secured the sufficient financial resources.

3.2.2 Unsuccessful case - Merger of Buskerud, Vestfold and Østfold Colleges in Norway

Three Norwegian universities started a merger process in 2009. The University Colleges of Buskerud, Vestfold and Østfold were three mid-sized Higher Education Institutions in the counties of Buskerud, Vestfold and Østfold in the south-eastern part of Norway around the Oslofjord, respectively.

With student numbers ranging from about 3000 (Buskerud) to 5000 (Østfold), they were at risk of becoming a target in a globally competitive education market for the Ministry of Education as 'too small to survive' (Svein Kyvik & Bjørn Stensaker, 2013). These colleges had similar academic profiles and offered professional education in programs such as teacher training, engineering and nursing at pre- school level. Negotiations went smoothly for a long time, but the resistance of academic staff at Østfold University eventually stopped the merger. There were several reasons why this process failed, the most important of which were probably the long distances between the different campuses, and the fear of losing academic influence in a new institution where the " headquarters" would be far from the campus.

Initially the regional authorities in Østfold were positive about the merger. They stated, however, that the needs of the Østfold region had not been adequately addressed throughout the preparation process. In particular, it was stressed that all planned PhDs would be located outside Østfold (as a result of the planned merger) and that the allocation of resources from a lower level (bachelor's degree) to PhD education would have negative consequences for the quality of the former. In view of the low educational levels in Østfold, local authorities focused on getting more young people from within the county to pursue Higher Education. Local authorities hosting the two campuses in Østfold (Fredrikstad and Halden) agreed with the regional authorities and the Østfold University College that during the merger planning process the interests of the region were not carefully taken into account.

4. Analysis of Results and Discussion

In this part, we present the analysis of the results concerning the success factors and the barriers that are most frequently depicted at the Appendices and derived from the findings of the systematic literature review. In addition, we selected to further analyze the following results because of their critical importance on the merging process.

4.1 Success Factors

While the literature indicates many factors that increase the potential for a successful merger, we have consolidated them into five critical prerequisites that should be put in place to make a merger successful — and without which there is a high probability of failure. We have chosen these prerequisites as they are consistently mentioned in the literature and they were also found in the analyzed cases (see Appendix, Figure 1). These include: a) a strong vision and a set of common values; b) the right leadership; c) a strong project management system; d) sufficient resources, financial planning and risk assessment; e) an effective communication plan.

a) A strong vision and set of common values

The vision should clearly explain why the merger is needed and what each party involved will gain from it. The vision statement should be unifying, inform the university and the wider community in clear, simple terms why the resulting institution is better equipped to succeed and should also describe the benefits.

b) The right leadership

The success of any transformation, especially in an area like higher education, depends on the leaders' skills, resilience and dedication. They must be strong, yet sensitive, determined, yet ready to listen, with clear vision and articulation, and ready to operate in a changing environment.

We should recognize that few academic executives are well prepared to act as transformative leaders. However, the process of consolidation and merger must take place at a deliberate and generally rapid pace with an actual cliff-edge event ahead (i.e., there are two or more institutions one day and there is only one the next day). The process does not allow for a step-by-step approach. In fact, the more the process drags out, the harder it becomes.

In addition, academic leaders generally do not evaluate, tolerate or manage the risk well as such training typically does not form part of their background. Although academic leaders may prefer to avoid taking risks, the process of bringing together two or more institutions is naturally a major risk not only for the institution but also for those leading the initiative.

Consequently, the governing bodies must choose the right management team to lead the complex process of a merger, sometimes from outside the existing institutions involved. Moreover, given that transformative skills are generally a rare attribute in academia, institutions, their governing bodies and the leaders themselves must be prepared to explore training and development opportunities.

It should be noted that only if they have the right teams, including faculty and staff, will the right leadership succeed. It is not possible to implement such a major change in the nature and culture of an HEI alone, and cooperation with stakeholders across all campuses and institutions is both necessary to smooth the path to consolidation and the right thing to do.

c) A strong project management system

A system that can easily help manage the timely aligned and coordinated completion of the hundreds of different tasks related to the infrastructure and operations of a university are essential. To do so, it is critical that merging institutions deploy a strong, agile and reliable project management system, staffed by experienced and dedicated staff, as early as possible.

d) Sufficient resources, financial planning and risk assessment

Mergers require monetary and non-monetary resources. During the merger, many expenses will occur related to information technology (IT), human resources (HR), management of facilities, research support systems, signage, branding, and communication and so on. Resources must therefore be reserved—proactively and in advance. Ideally, the resources would not only include money and capital, but also dedicated staff. These resources should go beyond those necessary to keep the institutions functioning as they merge. Resources can be identified internally, as for larger HEIs acquiring smaller institutions or externally, by means of system or government resources.

Moreover, financial planning to mergers have to do with sufficient capital for the merger not limited financial stimulation by the authorities, resolving problems with the design and implementation of the new, merged accounting system and cash flow, as well as higher than expected estimation of integration costs and fusion savings.

e) An effective communication plan

It is widely, deliberately, repeatedly and consistently considered critical to communicate the vision, purpose and progress of a merger. And it won't be easy. One should always bear in mind the admonition of George Bernard Shaw that “the biggest problem in communication is the illusion it has occurred.” Consequently, a careful, thoughtful, and bidirectional communication plan must be designed and resourced as part of the pre-merger effort. The earlier the better, since it also should help build the necessary sense of urgency.

There is significant risk that messaging may vary from group to group and speaker to speaker. It is imperative that a small set of clear, succinct, and compelling messages be crafted and vetted carefully. They should be repeated— verbally or in writing — exactly the same, from time to time, and from various leaders. In addition, the integration and establishment of single leadership in the functions of public relations should be a priority.

Furthermore, stabilizing messages from the chairman or the board should be frequent, such as “All pre-existing policies remain in force until they are formally changed” or “No student program is interrupted”, etc.

Finally, it is important to note that the presence of these five critical elements does not guarantee success. The lack of any of these essential elements could, however, jeopardize the potential for a successful merger to the detriment of the faculty, staff, communities and students concerned.

4.2 Analysis of results – Barriers

While the literature indicates many barriers that emphasize an unsuccessful merger, we have consolidated them into three critical elements that can lead to a complete university merger disaster. These elements include: a) Staff anxiety; b) Difficulty in merging the existing administrative systems; c) Cultural limitations. These barriers are consistently repeated in the content of the articles included in the analysis (see Appendix, Figure 2).

a) Staff and student financial implications

Mergers can have major financial implications for employees and students. Of course, mergers aiming at eliminating redundant services and programs might have an impact on employment security. More intensive mergers that unify payroll and other structures can also change compensation arrangements, although institutions often harmonize compensation on more advantageous terms, for example, so that merging institutions match salaries at the most generous party level. Mergers can lead to modifications in student fees. Stakeholders are also sensitive to possible operational disruptions, and the highest cost of attending higher education in many jurisdictions is in particular for students who have deferred employment.

b) Difficulty in developing uniform administrative systems

After the merger, a centralized and uniform common administrative service infrastructure must be established and become operational immediately. A well-functioning administrative infrastructure has several effects: increased management control; improved chances of successful merger; and increased student, staff, faculty and administrative satisfaction. Efforts to understand and invest in covering these needs should start well before the merger is completed. Common upfront costs relate to several factors such as IT and HR management,

facility management, security, enrolment management, compliance and auditing, finance, libraries, research and promotion systems, among many others.

c) Cultural limitations

There are three specific cultural limits to university mergers: the overall society culture, organizational culture and organizational identity. A low level of cultural capital and values based on concentrated power and hierarchical distance can significantly impede consolidation processes and increase mistrust. Distrust results in information hiding, cultural confusion and disturbance in the process of negotiation and integration. The traditional conservative academic culture does not promote radical change and raises barriers to the rapid integration of universities. Moreover, the organizational culture is changing much slower than the strategy or structure. The best way to overcome cultural barriers is to build long - term confidence in the form of closer cooperation and communication long before the merger takes place. The use of various communication, negotiation and mediation methods can be a substitute for the co- operation process.

Overall, it is important to note that the presence of these three critical elements, in combination or alone, naturally leads to an unsuccessful or problematic merger.

5. The case of Greece

In this section, we present the situation of higher education in Greece after World War II, the efforts made to restructure the map of tertiary education system with the current wave of mergers which is under way nowadays, and the challenges for the future.

5.1 Overview – Present status of Greece

After the Second World War, the number of universities established in Greece increased exponentially. In 1970, Law 652/1970 introduced a complementary to the university type of higher education: the first two-year studies “Centers of Higher Technical Education”, which were renamed “Centers of Higher Technical and Vocational Education” in 1977, with Law 576/1977. In 1983, under Law 1404/1983, the “Centers of Higher Technical and Vocational Education” were renamed Technological Educational Institutes. According to article 2: “The Technological Educational Institutes are distinguished from Higher Educational Institutes in their role and direction, their graduates, as well as in terms of content and degrees and have as a mission to:

- Provide theoretical and practical education, necessary in order to apply scientific, technical, artistic or other knowledge and skills in various professions.
- Contribute to the creation of responsible citizens, who are capable to act as executives in the process of the economic, social and cultural development of the country in the context of democratic planning.

In 2001, following developments in higher technical education throughout Europe, an attempt was made to upgrade technical education in Greece. With Law 2916/2001 Technological Educational Institutes became integrated to Higher Educational Institutes. However, this “upgrade” was not followed by corresponding measures for clear distinction and complementarity between Universities and Technological Educational Institutes. The situation in Greek Universities could be briefly presented as per the Explanatory Memorandum to the Greek Parliament in regard to the University of Ioannina Merger with TEI Epirus (Greek Ministry of Education, 07/2018):

- There is an overlap in HEIs and Technological Educational Institutes especially in fields such as Economic Sciences, Engineering and Geotechnical Sciences.
- Many institutions, particularly Technological Educational Institutes are small in size and spatially dispersed, and that is reflected in student choices as well as their international presence.
- Some Technological Educational Institutes and their departments have remarkable performance in research and teaching, that are equivalent to H.E.I.s which is reflected in their respective ratings and in various indicators (research programs, funding, staff).
- Some Departments of Technological Educational Institutes and some Institutes as a whole, due to their size, scientific field, understaffing, underfunding and their structure in general, present problems at various levels from infrastructure to teaching and research.
- The establishment of the European Higher Education Area (EHEA) and the Introduction of the European Credit System (ECTS) as a student workload assessment unit, as well as the European Qualifications Framework had as a result the Technological Educational Institutes to become internationally recognized as Universities and their students to have access to postgraduate study programs and doctoral studies. This was a positive thing in itself because in the end – and despite the prevailing formal conditions for assessing academic level – in many cases this represented the reality of the institutions, which was mostly carried out with much effort by the academic community of the Institution. Overall it further increased the confusion about the position of the two parallel areas of higher education, according to Law 2916/2001.
- The difference between “pure” science and its applications is reduced and in some disciplines it becomes inconspicuous.

The financial crisis in Greece, from 2009 up to now, has triggered tremendous reforms in all aspects of the Greek economy and society in general. The Greek educational system, including post-secondary education, is free for all the citizens and the cost for maintaining this service compared with the delivered quality has always been considered to be high. As a reaction to this and in alignment with the European educational system and the international trends, the Greek governments, during this period, have decided to minimize the number of higher education Institutions.

The first attempt was made with the Athena plan in 2011. Following the 2011 Higher Education Act (4009/2011), the Athena Plan was initiated. It aimed to strengthen the network of university institutions and improve internal efficiency through departmental mergers. It also aimed to make universities more innovative, to create regional centers of excellence, to link the academic sector to regional development needs and to strengthen research through fusions between universities and national research institutes. The Athena plan was also aimed at improving university visibility and rankings. The arguments for the Athena plan were based on the success of the Danish experience, in which twelve universities and a number of research institutes and specialist colleges were consolidated into nine larger, geographically wide- ranging institutions. However, mergers processes are complex and time consuming with uncertain results. The European Commission (OECD, 2018) argues that the Athena Plan did not deliver the targeted financial gains, as many of the consolidated departments did not actually operate and existed on behalf only. Even if the Danish merger model produced good results, there was no guarantee that it would succeed in applying it to the very different Greek context.

The “Athena plan” was launched as an attempt to correct the shortcomings in tertiary education in Greece and it foresaw a series of mergers, closures and generally a rationalization of the higher education system. It was first discussed in 2012 in the wake of the economic crisis and was implemented during 2013 and 2014, including a series of processes of integrations of smaller institutions or departments by bigger HEIs. However during the implementation of the “Athena plan” mainly restructuring was carried out within the institutions (establishment, elimination and merging of departments and faculties). There was also a merger between the Technological Educational Institute of Patras and the Technological Educational Institute of Messolonghi in 2013, based in Patras and the abolition of the University of Western Greece and the University of Central Greece in 2013.

The second attempt for extended university mergers in Greece has started in 2017 and is on progress. Under the 2017 Higher Education Act (4485/2017), the Government has established a procedure to redesign Greece's higher education and research resources. This process offers opportunities to consolidate, cluster and/or merge similar departments or institutions in a

region. The new legislation provides for regional Higher Education and Research Academic Councils, which will develop plans to increase cooperation between HEIs and research centers and seek efficiency gains through rationalization while strengthening links to regional development priorities.

Tertiary education in Greece includes 22 universities and 14 Technological Educational Institutes (TEIs). Universities provide general academic education, while TEIs have a mission to provide education at graduate and postgraduate level in science, technology and the arts, with an applied and professional focus.

From the beginning of 2018, three mergers took place in the Greek Higher Education system:

- the University of West Attika derived from the mergers of TEI of Attika and TEI of Piraeus,
- the University of Ioannina derived from the mergers of University of Ioannina and the Technological Educational Institute of Epirus,
- the Ionian University derived from the mergers of Ionian University and the Ionian Technological Educational Institute.

By 2020 it is expected that all technological institutions will disappear by mergers with universities. Moreover, all new universities provide new curricula and study programs.

5.2 Challenges for Greece

In the Greek context, we cannot assess the implementation as it is too early, but we can assess the design by trying to see to what extent the key determinants in University mergers can be identified. For this reason, we created the Table 3 below.

The pieces of information that have been used for the design of this table came from documents submitted by the Ministry of Education, Research and Religion in the Hellenic Parliament and are the following: a) Explanatory memorandums on draft laws; b) Draft laws; c) Reports of the Treasury of the State in the Ministry of Education Research and Religion Law plans; and d) the laws "Establishment of the University of Western Attika and other provisions" and "University of Ioannina, Ionian University and other provisions". Considering the first

three university mergers that have already completed (Hellenic Parliament, 2018); (Hellenic Parliament, 2018); (Law n. 4521 (FEK 38/A/02.03.2018), 03/2018) and (Law n. 4559 (FEK 142/A/03.08.2018), 08/2018); we examined the following specific key determinants that are arranged into three categories: “Taken into account”, “Partly Taken into Account” and “Not taken into account”:

Key determinants for Universities merger	University of West Attica			University of Ioannina			Ionian University		
	Taken into account	Partly taken into account	Not taken into account	Taken into account	Partly taken into account	Not taken into account	Taken into account	Partly taken into account	Not taken into account
Identifying and reaching out to internal and external stakeholders		x			x			x	
Ensuring adequate feedback loops at all levels			x			x			x
Shaping out the added value of the merger		x			x			x	
Joint decision-making between the different institutions	x			x			x		
Transparent approach that allows everyone to voice their opinions		x			x			x	
Setting clear progress indicators that are visible and understood by all parties			x			x			x
Straightforward and clear common political and strategic goal in the Green and White papers from		x			x			x	
Allocating resources to the transition phase for its smooth undertaking			x			x			x
Estimating the transition costs			x			x			x
No significant overlap in the academic offers.		x			x			x	
Considering the losses, opportunity costs and assess the relevance of alternative collaboration mechanisms cost			x			x			x
Geographical coherence	x			x			x		
Effective communication plan in place		x			x			x	

Table 3:Key determinants in Greek University mergers

More specifically, Table 3 illustrates that in all three cases we have the same assessment of the key determinants. It is also worth mentioning that in the case of Greece in one hand specific requirements are not taken under consideration and on the other hand they are taken or they are partly taken.

Key determinants Taken into account

- Joint decision-making between the different institutions: The Ministry of Education, Research and Religion in all three cases set up committees that consisted of representatives from the HEIs and the Ministry of Education itself. The committees were responsible to examine the possibilities of the best merging outcomes.
- Geographical coherence: In the case of the three institutions mergers that occurred in Greece since the beginning of 2018, we can observe that, the premises of the University of West Attica are within a very short distance while the Ionian University and the University of Ioannina are in the same geographical region.

Key determinants Partly taken into account

- Identifying and reaching out to internal and external stakeholders: The Ministry of Education set up the committees and followed a top-down approach without taking under consideration all the different external and internal stakeholders.
- Shaping out the added value of the merger: The initial plan of the Ministry of Education regarding the merging process is to add extra value. For this reason, the President of HQA Prof. N. Paisidou points out that there is a need to draw up a scientific study on the academic, economic and social aspects associated with this change.
- Transparent approach that allows everyone to voice their opinions: The committees set up by the Ministry of Education consisted of closed teams so that the merging process lead to lack of transparency.
- Straightforward and clear common political and strategic goals in the Green and White papers from authority: Many governments worldwide, in the context of a comprehensive reform of higher education, issue Green Paper on reform recommended substantial changes, and after comment and public discussion a White Paper laid out the reform plans in more detail. In the Greek case, an ad hoc process followed without taking into consideration the above practice.
- No significant overlap in the academic offers: Due to local interests an overlap can be observed among academic programme offers.
- Effective communication plan in place: There was an attempt to design a careful, thoughtful, and bidirectional communication plan, however, this attempt was not perfectly successful.

Key determinants Not taken into account

According to the papers that have been consulted, we identified that the following factors that can seriously affect university mergers have not been taken under consideration:

- Ensuring adequate feedback loops at all levels;
- Setting clear progress indicators that are visible and understood by all parties;
- Allocating resources to the transition phase for its smooth undertaking;
- Estimating the transition costs;

- Considering the losses, opportunity costs and assess the relevance of alternative collaboration mechanisms cost.

In the case of Greece, all the decisions are centrally made by the Ministry of Education, Research and Religion. The Minister of Education defines the direction and the strategy for the Greek higher education system. The Ministry of Education plays the key role in decisions concerning the institutions mergers that occurred nowadays in Greece, as well. Unfortunately, the universities are public, and this lead to lack of undertaking their own responsibilities and initiatives.

Also, no evaluation of the effort to reorganize the higher education landscape has been made so far regarding the public universities' merger. The President of HQA, Professor N. Paisidou (ESOS, 2019), during her speech at the Committee on Educational Affairs in Greek Parliament on 08/01/2019, criticized the merger process in higher education. She highlighted the need to draw up a scientific study on the academic, economic and social aspects associated with this change. Furthermore, she pointed out that from the previous HQA evaluation process (A.D.I.P., 2016) the strengths and weaknesses of all HEIs emerged. The conclusions derived from the aforementioned evaluation can be used as data for this scientific study, which, of course, should precede the vote on all relevant legislation.

According to the report "Education for a Bright Future in Greece, Reviews of National Policies for Education", that refers to Greece, there is a need to identify long-term and medium-term priorities, incorporating some of the important initiatives taken to date. In addition, it is important to build a national strategy for tertiary education and to reach a consensus on the approach that should be adopted in order to meet the longer-term challenges facing the system (OECD, 2018).

A strategy ought to secure coherence by providing greater stability of the underpinning principles on which the system is managed and on the high-level goals of the system. Such a strategy should build a consensus among key stakeholders and cut across political divides through wide and genuine consultation. Effective consultation means that the resulting

strategy will be better informed and should win greater support from those affected – partly through their participation in the process of engagement, and also because it is more likely to reflect their perspectives. This will lead to a greater chance of successful implementation.

Last but not least, the merger proposals initiative ideally should come from public universities in collaboration with local stakeholders and then has to be planned and realized with the agreement of the Ministry of Education. The bottom-up approach mitigates some of the risks associated with top-down rationalization plans. However, there is a risk that local interests may mean that some proposals will never take off.

5.3 Conclusions – Future Work

Considering all the above it is clear that it takes time to evaluate the results of mergers in higher education. Moreover, it is highly recommended that the Ministry of Education, Research and Religion should first evaluate the mergers that have already occurred, before proceeding with its future plans of merging all the Greek HEIs.

This study provides the basis for an analysis of the merger in Greek tertiary education as the procedure is at an initial stage.

For future work, it is rather intriguing to examine the following issues that are related to the university mergers

- a) Follow and analyse the whole Greek university merging process that will take place shortly
- b) Assess the outcomes of mergers and compare them to the international practices and experience in more detail.

References

- A.D.I.P. (2016). *External evaluation reports*. Athens: HQA. Retrieved from ADIP.
- Azziz, R., Hentschke, G. C., Parthenon-EY, E., Young, L. L. P., Jacobs, B. C., Jacobs, L. A., & Ladd, H. (09/2017). *Hentschke, G. C., Parthenon-EY, E., Young, L. L. P., Jacobs, B. C., Jacobs, L. A., & Ladd, H. (09/2017), Mergers in Higher Education: A proactive strategy to a better future?*. New York: TIAA Institute.
- Blau, P. (1973). *The Organization of Academic Work*. New York: Wiley.
- Brown, N., Denholm, J. and Clark, T. . (2003b). *Case Study 4: The University of Manchester and the University of Manchester Institute of Science and Technology*. Oxford: Higher Education Policy Institute.
- ESOS. (2019, January 08). <https://www.esos.gr/arthra/60711/xesasma-tis-proedroy-tis-adipsti-voyli-meta-ta-ypotimitika-sholia-toy-k-gavrogloy-gia>.
- Estermann, T., & Pruvot, E. B. (2015). The Rise of University Mergers in Europe. *International Higher Education*, 82, 12-13.
- EUA. (2015). *DEFINE thematic report: University mergers in Europe*. Brussels: European University Association.
- Gellert, C. (1991). *Alternatives to Universities*. 2001 L Street, NW, Suite 700, Washington: OECD Publications and Information Centre .
- Georghiou, L., & Harper, J. C. (2015). (2015). *Mergers and alliances in context*. In *Mergers and Alliances in Higher Education (pp. 1-14)*. Springer, Cham.
- Goedegebuure, L. (1992). *Mergers in Higher Education: A Comparative Perspective*. Enschede: University of Twente. Enschede: University of Twente.
- Greek Ministry of Education, R. a. (07/2018). *Explanatory Memorandum to the Greek Parliament in regard to University of Ioannina Merger with TEI Epirus: .* Athens.
- Harman, G., & Harman, K. (2003). Institutional mergers in higher education: Lessons from international experience. *Tertiary Education and Management*, 9(1), 29-44, 9(1), 29-44.
- Harman, G., and Harman, K. (2008). Strategic Mergers of Strong Institutions to Enhance Competitive Advantage. *Higher Education Policy*, 21(1), 99-121.
- Harman, K. (2002). Merging divergent campus cultures into coherent educational communities: Challenges for higher education leaders. *Higher Education*, 44(1), 91-114.
- Harman, K. and Meek, V.L. . (2002). Introduction to Special Issue: Merger Revisited: International Perspectives on Mergers in Higher Education. *Higher Education*, 44 (1), 1-4.
- HEFCE. (2012). *Collaborations, Alliances and Mergers in Higher Education – Consultation on Lessons Learned and Guidance for Institutions*. London: Higher Education Funding Council.
- Hellenic Parliament. (2018, February 02). <https://www.hellenicparliament.gr/UserFiles/2f026f42-950c-4efc-b950-340c4fb76a24/i-uniwest-eis-all.pdf>.
- Hellenic Parliament. (2018, June 18). <https://www.hellenicparliament.gr/UserFiles/2f026f42-950c-4efc-b950-340c4fb76a24/p-ioanpa-eis.pdf>.

- Hentschke, G.C., Parthenon-EY, E., Young, L.L.P., Jacobs, B.C., Jacobs, L.A. and Ladd, H., (2017). *Mergers in Higher Education: A proactive strategy to a better future?.* New York: TIAA Institute.
- HQA. (2018). *Annual Report 2017*. Athens: ADIP.
- Kyvik, S. (2004). Structural changes in higher education systems in Western Europe. *Higher education in Europe*, 29(3), 393-409.
- Law n. 4521 (FEK 38/A/02.03.2018). (03/2018). *Establishment of University of West Attika and other provisions*. Athens: Ministry of Education, Research and Religion, Hellenic Parliament.
- Law n. 4559 (FEK 142/A/03.08.2018). (08/2018). *University of Ioannina, Ionian University and other provisions*. Athens: Greek Ministry of Education, Research and Religion, Hellenic Parliament.
- Mintzberg, H. (1983). *Structure in Fives. Designing Effective Organizations*. Englewood Cliffs: Prentice Hall. Englewood Cliffs: Prentice Hall.
- Mulvey, T. (1993). *An Analysis of the Mergers of American Institutions of Higher Education*. University of Massachusetts: Ann Arbor.
- Norgård, J. D., and Skodvin, O-J. . (2002). The importance of geography and culture in mergers: A Norwegian institutional case study. *Higher Education* , 44, 73-90.
- Norgård, J.D. and Skodvin, O.J. (2002). The importance of geography and culture in mergers: A Norwegian institutional case study. *Higher Education*, 44(1), 73-90.
- OECD. (2018). *Education for a Bright Future in Greece, Reviews of National Policies for Education*. Paris: OECD.
- Pinheiro, R., L. Geschwind, and T. Aarevaara. . (2013). Mergers in Higher Education: What do we Know and What are we Lacking? Rotterdam: EAIR annual conference.
- Pritchard, R. M., & Williamson, A. (2008). Long-term Human Outcomes of a " Shotgun" Marriage in Higher Education. *Higher Education Management and Policy*, 20(1), 1-23.
- Puusa, A., & Kekäle, J. (2015). Feelings over facts—a university merger brings organisational identity to the forefront. *Journal of Higher Education Policy and Management*, 37(4), 432-446.
- Ribando, S. J., Slade, C. P., & Fortner, C. K. (2017). Once More into the Breach: Examining the Human Capital Impact of a University Consolidation over Time. *Innovative Higher Education*, 42(5-6), 521-535.
- Ripoll-Soler, C., & de-Miguel-Molina, M. (2014). Are mergers a win-win strategic model? A content analysis of inter-institutional collaboration between higher education institutions. *Tertiary Education and Management*, 20(1), 44-56.
- Seliga, R., Sulkowski, L., & Wozniak, A. (2018). Barriers to University Mergers-Comparative Analysis of Universities in Europe. In *International Conference on Applied Human Factors and Ergonomics* (pp. 558-567). Springer, Cham.
- Siddaway, A. (2014). *What is a systematic literature review and how do I do one University of Stirling, (I), 1*. University of Stirling, (I), 1.
- Skodvin, O. J. (1997). The reorganisation of non-university higher education in Norway: Problems and potentials. *Tertiary Education and Management*, 3(4), 317.
- Skodvin, O. J. (1999). Mergers in Higher Education – Success or Failure. *Tertiary Education Management*, 5, 65-80.
- Skodvin, O. J. (2014). Merger as an Instrument to achieve Quality in Higher Education-Rhetoric or Reality? *The European Higher Education Society, Track, 1*, 56-70.
- Stensaker, B., Persson, M., & Pinheiro, R. . (2016). When mergers fail: a case study on the critical role of external stakeholders in merger initiatives. *European Journal of Higher Education*, 6(1), 56-70.

- Svein Kyvik & Bjørn Stensaker. (2013). Factors Affecting the Decision to Merge: The case of strategic mergers in Norwegian higher education. *Tertiary Education and Management*, 19:4, 323-337, 19(4), 323-337.
- Ursin, J., Aittola, H., Henderson, C., & Välimaa, J. . (2010). Is education getting lost in university mergers? *Tertiary education and management*, 16(4), 327-340.
- Williams, J. (2017). *Collaboration, alliance, and merger among higher education institutions*. Paris: OECD.

Appendix

<div>SUCCESS FACTORS</div> <div>PAPER</div>	EUA, DEFINE Thematic Report (2015)	Skodvin, O. J. (2014)	Seliga, R., Sulkowski, L., & Wozniak, A. (2018)	Hentschke, G. C., Parthenon-EY, E., Young, L. L. P., Jacobs,	Svein Kyvik & Bjørn Stensaker (2013)	Ripoll-Soler, C., & de-Miguel-Molina, M. (2014)	Skodvin, O. (1999)	Ole-Jacob Skodvin, 1997	Williams, J. (2017)	Puusa, A., & Kekäle, J. (2015)	Ribando, S. J., Slade, C. P., & Fortner, C. K. (2017)	Harman, K. (2002)	Georghiou L., Cassingena Harper J. (2015)	Brown, N., Denholm, J. and Clark, T. (2003b)	Stensaker, B., Persson, M., & Pinheiro, R. (2016)
SUCCESS FACTORS															
Consider halting the process / alternative collaboration measures if negative outlook	x														
Carry out an ex-post evaluation of the process	x														
Favourable political and regulatory developments (autonomy reform; "operation campus")	x														
Geographical coherence (same campus)	x												x	x	
No significant overlap in the academic offer	x					x	x								
Common history of the partners														x	
Developing a coherent institutional identity	x													x	
Create common platform between the merging Institutions		x						x					x	x	
A strong project management system		x		x			x	x				x	x	x	
Create a new common identity and unique puprose		x						x	x	x					
Sufficient resources, financial planning and risk assesment		x		x		x	x		x			x	x	x	
Plan implementation on a stable basis			x										x		
Develop technical network					x			x					x		
Clear strategic rationale													x		
External support and recourses												x	x		
Internal support from staff and students															
Secure the sufficient financial resources									x					x	
Trust and partner compatability									x						
Shared governance and joint decision-making									x						
Clear understanding of roles and responsibilities									x						
Green and White paper from authority									x						
Equal treatment between the staff												x			

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SUCCESS FACTORS															
Raise the institutional profile	x									x					
A strong vision and set of common values	x	x		x			x					x		x	
Shape out the added value of the merger	x														
Identify expected gains	x						x								
Consider losses, opportunity costs and assess relevance of alternative collaboration mechanisms	x														
Cost															
Estimate transition costs	x								x						
Allocate resources to transition phase	x						x								
Involve the different groups of the institutions	x												x	x	
Strike the balance between involvement and disruption from normal workload	x														
Consider thematic organisation and different degrees of involvement	x														
Consider setting up advisory bodies to strengthen the link between the new leadership and the different structures / groups	x											x		x	
Identify and reach out to internal and external stakeholders	x														
An effective communication plan	x			x				x	x					x	
Ensure adequate feedback loops at all levels	x														
Promote the academic case of the merger	x					x								x	
Right leadership	x			x	x		x					x	x	x	
Acknowledge change and possible losses and explain gains to the different constituencies	x														
Adopt a transparent approach	x												x	x	
Set clear progress indicators	x													x	
Monitor progress at intermediary stages and assess costs	x											x		x	

Figure 1: Success factors affecting University mergers

BARRIERS	PAPER	EUA, DEFINE Thematic Report (2015)	Skodvin, O. J. (2014)	Seliga, R., Sulkowski, L., & Wozniak, A. (2018)	Hentschke, G. C., Parthenon-EY, E., Young, L. L. P., Jacobs, B. C.,	Svein Kyvik & Bjørn Stensaker (2013)	Ripoll-Soler, C., & de-Miguel-Molina, M. (2014)	Skodvin, O. (1999)	Ole-Jacob Skodvin, 1997	Williams, J. (2017).	Puusa, A., & Kekäle, J. (2015)	Ribando, S. J., Slade, C. P., & Fortner, C. K. (2017)	Harman, K. (2002)	Georghiou L., Cassingena Harper J. (2015)	Brown, N., Denholm, J. and Clark, T. (2003b)	Stensaker, B., Persson, M., & Pinheiro, R. (2016)
BARRIERS																
Limited human resources and significant additional workload for involved staff		x						x								
Change management methodologies not proportional to the ambition of change		x														
Change of leadership teams during the preparation process		x														
Diversity in the governance and administration profiles of the partners		x										x				
Cultural limitations		x		x		x		x				x				x
Pioneering merger process: no 'best practices' available		x														
No solid base of staff support could lead to resentment and disappointment		x														
No extra resources were given to the university which meant that it had less relative research funding after merger than prior		x		x												
Difficulty in developing uniform administrative systems		x				x				x	x					
Financial implications for staff and students		x		x		x		x		x	x	x	x			
Lack of provisions generating forms and methods of mergers				x						x						
Unstructured ownership of the organization				x												
Geographical distance between the campuses						x					x					x
Little legal experience in the area of public university mergers				x												
Poor strategic planning				x						x						
Lack of experience in managing change				x												
Lack of political decisions				x												x
HEIs not in the same financial position																x
HEIs focus in regional/their own interests													x			x
Internal fears with respect to academization or academic drift																x
Different strategic agendas of all external stakeholders																x
Too optimistic and overconfident decision-makers						x										
Fears of hassle of identity													x			

Figure 2: Barriers affecting University mergers